PHARMACEUTICAL HISTORIAN

Vol. 3 No. 1
May 1973

Newsletter of the BRITISH SOCIETY FOR THE HISTORY OF PHARMACY
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The Society

THE annual report of the Society shows that in spite of the increase in the annual subscription there has been no decrease in membership and there are signs that the general growing interest in "things historical" evident in the national Press, magazines and television, is also reflected in pharmacy. A number of visitors to the meetings arranged during 1972 had not previously shown an interest in the history of pharmacy.

Congratulations

ALL members of the Society will join in congratulations to Dr J.K. Crellin and Mrs A. Lothian Short on being awarded Ferchl medals. These commemorative medals were awarded by the German History of Pharmacy Society to a number of distinguished historians in celebration of the eightieth birthday of Fritz Ferchl, an eminent historian of pharmacy.

Administration

THE Committee of the Society continues to record its appreciation of help, both financial and administrative, provided by the Pharmaceutical Society of Gt. Britain and its officers. Following a period of considerable difficulty without secretarial assistance, the Society has now made arrangements for Mrs M.H. Lakie to take over secretarial duties. The Committee is extremely grateful for this new arrangement especially in view of the fact that Mrs Lakie has shown an active interest in the history of pharmacy.

A piece of research carried out with Mr D. MacMurray hit the headlines in *The Scotsman* last year (April 5, 1972) following an evening meeting of the Scottish Department of the Pharmaceutical Society in Edinburgh. At that meeting Mrs Lakie and Mr MacMurray reported on the investigation of two 17th century accounts. These two accounts, the first headed "Accomp due by David Pringle to James Hamilton" and the second "Accomp of the funeral Charges and Mummings of David Pringle, Chirurgeon Apothecarie, Burgess of Edinburgh payed by Reuben McRabie, Barber, merchant in Edinburgh" were dated 1694 and 1695 respectively. Although these accounts were valuable because of their age and condition the items listed on them were of only marginal interest. However it was discovered that both Hamilton and Pringle had been surgeon/apothecaries in Edinburgh and copies of their Testaments can be seen in Register House. At that point in the investigation, the accounts had raised more questions than they answered and it seemed unlikely that any other useful information could be elicited – and then a third document came to light.

It was described as a 'Backbond by James Anderson, WS, to the Lords of the Treasury on the Gift of Escheat of the estates of Mrs Marion Pringle and others, condemned to death on charges of adultery, poisoning etc.' and dated 1694/1702.

In Register House, Edinburgh in the Book of Justiciary for the period is a beautifully legible, almost verbatim report of the trial from which was traced the path "of Poison, Pills and Apothecaries" or otherwise "of Passion, Poison and Pills" which led to the ultimate punishment being shared by the principal characters, Mrs Marion Pringle, wife of the Surgeon/Apothecary David Pringle and Daniel Nicolson, Writer, legal adviser to the same David Pringle.

Make a note of this date

DURING the British Pharmaceutical Conference, London Sept. 10–14, the Society is arranging a History of Pharmacy Session at 17 Bloomsbury Square, on September 11 at 2.15 pm. There are to be two papers, "Bloomsbury Square and Bloomsbury" by R.G. Todd, and "The Chelsea Physic Garden" by D.C. Harrod.

All who are interested in the history of pharmacy are invited to attend the session, whether or not they are members of the Conference or the Society.

http://dx.doi.org/10.24355/dbbs.084-201801041611

John Badger
APOTHECARYITE

T.D. WHITTET

Hon. D.Sc., B.Sc., PL.D., F.P.S., F.R.I.C., D.B.A.

Apothecaries have had several titles over the past 600 years. While they were members of the Pepperers' Guild between the 12th and 15th Centuries it was then not unusual for the same person to be called pepperer, spicer or apothecary on different occasions. From 1345 until 1429 the apothecaries, spicers and grocers were united in the Fraternity of St. Anthony which received a Royal Charter in 1429 as the Wardens and Company of the Mystery of Grocers' of London.

In the 14th Century the titles spicer and apothecary were used almost indiscriminately but thereafter the latter term was confined to those dealing in medicines.

From quite early times titles derived from the Greek word Pharmakon were also used for apothecaries e.g. pharmacist, pharmacolam, pharmacopola, pharmacopeus, etc. The title chemist was used for an apothecary as early as the 17th Century and many variants of the word druggist have been in use since the 16th Century, sometimes for apothecaries and others for wholesalers of drugs (examples include drugster, druggier, drugman, etc.)

As the apothecaries gradually changed from the practice of pharmacy to that of medicine, numerous members of the Society of Apothecaries adopted the titles of chemist and/or druggist either alone or in addition to the word apothecary. Among those calling himself chemist and druggist as well as apothecary was Thomas Bromfield (Bromfield or Brumfields) who was Master of the London Company from 1706 to 1707. The title "apothecaryite" appears to have been used by only one person. It occurs in Barrett's History of the Society of Apothecaries where, in commenting on the quarrel between the apothecaries and the physicians the author wrote "Many pens and much ink and paper had been expended on the quarrel; one Dr Badger, an "apothecaryite" having been actively employed in this direction."

He, however, wrote on his own initiative, and when later he endeavoured to saddle the Company with the cost, was quickly and rightly suppressed".[1]

John Badger, son of John, tailor of Winchester, was bound for 8 years to Sidney Lutton, citizen and apothecary, on September 3 1667. He applied for his freedom on September 7 1675, was referred to the College of Physicians and was sworne in and gave 13s 4d in lieu of a spoon.[2]

Venn[3] described him as "of Hants" and stated that he was admitted a pensioner at Emmanuel College, Cambridge on December 14 1681 and he took his M.B. in 1687.

The identity of the Cambridge graduate with the London apothecary is confirmed by a reference in Clark's History of the Royal College of Physicians which stated that in 1683 John Badger, apothecary and Cambridge bachelor of medicine applied for a licence but brought no discharge from the Apothecaries' Company. He was examined three times, satisfied the examiners and paid his formal visits to the Fellows. He was, however, asked to defer his admission as a licentiate and take his doctor's degree.[4] This he did and presented himself again in 1687.[5]

College Trickery

A week before he applied, however, a new Charter and new statutes had come into force and Badger was told that he must prove that he was entirely relieved of any jurisdiction and obligation to the Apothecaries' Company. Clark commented "This he never did. The College thus defeated his attempt to win the right of practice for such apothecaries as also acquired a medical qualification. When he wrote on the apothecaries side in the next great collision of the two interests, the Society refused to pay his expenses so he seems to have had little personal satisfaction. But the trick by which the College defeated him was remembered against it."

Clark stated that Badger obtained his Bachelor of Medicine by royal mandate and not by examination but appears to have been wrong in this, as his later comments show.

Badger's Revenge

Clark[6] later reported "A Cambridge graduate with a grievance now deliberately sowed dissention between the College and the Universities. Dr John Badger, forsaking the apothecary's trade, had gone to Cambridge and complied with all its requirements, only to find that when he returned to London as a doctor he was excluded from the College by retrospective legislation. When the College was at loggerheads with the apothecaries he skirmished on the flanks, and he shrewdly attacked the College's claim to represent the highest medical knowledge by advertising to the world that a good proportion of its fellows were worse qualified than some of the 'outliers' of whom he was one. He was associated with a Catalogue of the Fellows, which noted those of whom were only foreign doctors, and probably with a Register of the Doctors of Physic in our two Universities of Oxford and Cambridge. The purpose of the latter was to belittle the connection of the College with these universities, and indeed, since the admissions under the

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Charter of James II, that was a vulnerable point. There was no immediate result but the exposure may well have contributed to a revival of the untenable claims of university licentiates." Clark[7] concluded "Dr Badger's activities raise a suspicion that the university doctors may have favoured the apothecaries claim to practice."

In 1693 a small pamphlet appeared purporting to contain the statutes of the College with an English translation. As Clark[8] stated "the jealously-guarded secrets of the College were thrown open to their enemies and to the world in general. Who was responsible for the publication could be deduced easily enough from the preparatory matter, which gave an unsparingly hostile account of the treatment of Dr Badger. The worst of it was that Badger must have been supplied with the statutes by some traitor ..... By 1705 ..... Badger had given his accomplices away. Dr Bernard had given him the new statutes and Dr Dare the old. No charge was ever laid against either of these, presumably because no evidence was found until too late. Dr Badger went on with his mischief-making publications, and Dr Bernard helped him again by transcribing the list of signatories to one of the College subscriptions for the Dispensary." Dr Bernard was the former apothecary of St. Bartholomew's Hospital and George Dare was a Liveryman of the Society of Apothecaries, so they were presumably in sympathy with Dr Badger.

The Burrowing Badger

When John Colbatch, an apothecary of Worcester, was admitted to the College he had to free himself from all connections with his trade guild, the Worcester Mercers' Company. He complained of this to the President and said that Dr Badger had instigated him to write.[9]

The final reference to the controversial doctor in the College's history reads "Dr Badger was still burrowing and the university doctors, whom he incited, were holding off the College in the hope of doing without its licence."[9]

Dispute with the Apothecaries Company

Badger apparently fell foul of some of the apothecaries, for in 1701 he published a broadsheet Dr Badger's Vindication of himself, from the groundless CALUMNIES and Malicious SLANDERS, of some London-Apothecaries, which was addressed to Mr Peter Gelsthorpe, present Master, Mr Thomas Gardner, Master Elect ..... and to other Gentlemen of the Court of Assistants. Badger referred to the Statutes of the College of Physicians made and promulgated on September 19 1687 with several new laws against apothecaries. He stated that he was courted by William Bradford, the Master, James Travers (Travies), Warden, the greater part of the Court of Assistants and many more of the Livery, particularly George Dare. He claimed that he was asked to translate and print the old and new statutes, being promised that the Society would take the whole impression. This was not done, the copies being left on his hands.

In 1695 when the Dispensaries were started, He claimed that he was asked to prepare a roll of the College of Physicians with a list of those who had subscribed to the Dispensaries. He received 10 guineas for his work and another £10 later. In 1697 a pamphlet was issued by the Dispensaries promising to supply medicine at 16s in the pound cheaper than the apothecaries. The Court of Assistants asked him to reply to this. He did so and put in a claim for £67.14s.6d. for loss of time and out of pocket expenses for the previous work but was forced to sign a receipt in full for "all debts dues and demands."

He concluded "By all this, it is manifest that I did not on my own Humour and head, (as has been falsely suggested by some of the late Courts of Assistants) undertake and write what I have done, but by the Advice and Direction, or at least with the Approbation and by the encouragement of the most considerable Persons of the Company."

Appended to the Broadsheet is a letter to Mr Peter Gelsthorp, Master of the Worshipful Company of Apothecaries:–

"Sir,

I here present you with a New-Year's Gift, Viz. 100 of the last New-Laws of the College made in English only, Printed from the Copy I received from your hands, and at your desire, to serve the Public, and I believe they may be Serviceable; if you in the station that you are now in, please communicate them to your Court of Assistants, or to such Members of Parliament whom you may judge proper in this juncture of Affairs; though the Charge of what I have Published for the Company, hitherto, has layn on my hands, I hope these may not.

Sir,
I am
Your Humble Servant,
Decemb. 1701. JOHN BADGER

Several of Badger's publications are reproduced in the "Short Answer to a late book entitled Tentamen Medicinale published in 1705.

Although Barrett, the Society's first historian, was not sympathetic to him, it appears that Badger was unfairly treated both by the College and the Society. The College changed its rules after Badger had satisfied its examiners in his application for a licence and had taken a medical degree whilst the Society must have recognised some responsibility for his publications or it

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would not have given him three payments amounting to £30. That the Society had previously been well disposed towards him is shown by the following entries in the minute books:–

JUNE 17 1692 He had asked leave to fine for all offices and "in respect and kindness to the doctor the fine was fixed at £30 and if he so desired he could be defranchised as well." On October 13 the fine was reduced to £20. He does not appear to have taken advantage of this immediately for on May 22 1696 there is an entry "In consideration of the respect the Company bear him the fine of £20 to be remitted and he to be discharged from the Company under the Common seal if he thinks fit." The delay may well have been due to the fact that Badger hoped to obtain the licentiate of the College of Physicians without leaving the Company of Apothecaries.

Badger's Cordial

Badger invented one of the earliest proprietary medicines. Of it Thompson[11] recorded "The Olbion, popularly known as Badger's Cordial, appears to have been a pioneer effort in preventive medicine, as it was extolled not so much as a cure-all as a preparation against all contagions, Pestilential and epidemic diseases! John Badger, the inventor, who calls himself a Doctor of Physick lived in St. Swithin's Lane, over against the sign of the Carpenter, next door to the Crown. He claims his Cordial 'to be a specific for the cure of Agues and Intermitting Fevers of all sorts, viz. Quotidian, Tertian and Quartan, if prudently and seasonably made use of. It increases appetite, cures colds and pains in the head, coughs and Rheums. For all these there is not a more Noble Medicine to be found, and it is more safe and by far exceeds the ancient compositions of Mithridate and Venice Treacle, those grand medicines of the Apothecaries, which no one of them ever did or could make true.

It deserves to be treasured up by all families in the room of those adulterate and viscious (sic) compositions, which the Company of Apothecaries are now going to prepare at their common Hall, to the detriment of their fraternity and the future ruin of this Society."

According to Thompson "It is probable that Badger's Cordial was a preparation of Peruvian Bark, which about this time was being used in the treatment of ague and intermitting fevers."

Badger and the King's Evil

In 1749 Badger,[12] described as an apothecary on the title page, published a book entitled In Support of the Efficacy of the Royal Touch. He wrote "It appears from undoubted authorities, uncontrovertible Arguments and Evidences, that both the Crowns of England and France have been, for a long succession of years, invested with the miraculous gift of curing the strumous swelling of the glands otherwise called the King's Evil by the Royal Touch. We can trace up this act of touching as high as Edward the Confessor."

Applicant for post as Physician to St. Bartholomew's Hospital on Feb. 27 1697/8 Badger, along with the apothecaries Sir John Colbatch and Peter Gelsthorp and some physicians, applied for the post of physician to St. Bartholomew's Hospital which had become vacant on the death of the former apothecary, Francis Bernard. A physician was appointed.

I have been unable to find Badger's will or the date of his death. In the "Short Answer ..... to Tentamen Medicinale it is stated that he had not obtained satisfaction from the Society of Apothecaries before his death which therefore suggests that it was between 1701 and 1705. On the other hand his book published in 1749 does not describe him as the "late". His name does not appear in the lists of the Society of Apothecaries after 1695.

I have also not been able to discover why Barrett called Badger an Apothecaryite or whether it was a title Badger used himself. The word does not appear in the Oxford English Dictionary, the British Museum Catalogue or Dr James's Medical Dictionary.

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http://dx.doi.org/10.24355/dbbs.084-201801041611

18th Century Bristol Poll Books

Source list of Apothecaries and Chemists and Druggists

F.H. RAWLINGS M.P.S.

The earliest directory for Bristol was Sketchley's of 1775 from which lists of names and addresses of practising Apothecaries and Chemists & Druggists have been made. The next available directory is at the end of the century, by Matthews in 1793/4. After that date there is a directory for most years.

Other useful sources are the Burgess Books which give the date of admission to the Burgess Roll, which is the date of commencing to practice. The Apprentice Books give the date and name of the apprentice and his master which can be used, through a series of apprentices with one master to give some idea of the period the master was in practice. No yearly list can be made with any precision for those in practice early in the century.

The published Poll Books give lists of the voters listed under parishes, how they voted and their occupations. The elections lasted a few days, sometimes up to fourteen. No doubt the campaigns hotted up as they progressed. Some of the Books include such material as the election addresses of the candidates.

The Books are available for the elections of the years 1722, 1732, 1734, 1739, 1754, 1774, 1781, and 1784 either in the City Archives Office or the Central Library, neither have a complete set. The 1722 book is a reprint in 1892 (a limited edition of twenty one copies) of the only known original in the British Museum Library.

Because the Poll Books mostly do not list non-voters we cannot be sure that the lists so obtained are complete. However, an indication that this might be so is provided by the fact that the lists for 1732 and 1734 are identical. Comparison of the lists from the 1774 Poll Book and 1775 Sketchley's Directory revealed twenty-seven names common to both lists, with the Poll Book listing twelve names not in Sketchley's which lists thirteen not in the Poll Book.

The Poll Books are particularly valuable because they list the out of the city voters, or as some of the books head it, 'Country Voices'. From these have been compiled a list of forty eight apothecaries, three druggists and one chemist, mostly from the small towns of Gloucestershire and Somerset. It is doubtful if these could have been discovered in any other way.

This list shows where certain apothecaries practised before they moved to Bristol, for example, two Bristol Infirmary apothecaries:–

Thomas Elmes (Infirmary, 1775–7) was in practice in Axebridge, Somerset in 1774.

Thomas Webb Dyer (Infirmary, 1789–1810) practiced in Bath in 1781 and in Dursley, Gloucestershire in 1784.

Many of the names in this list are also listed in the Bristol Burgess Books for earlier dates, having served their apprenticeship in the city and later moved out to practice in the surrounding areas. Nine of the apothecaries were practising outside Bristol within twelve months of enrolment as Bristol Burgesses. Thus it is wrong to assume that lists made from Burgess Books would be of practitioners within the city, other than as apprentices.

The lists of Bristol resident voters provided a list of 106 apothecaries, two were apothecaries in one year, and druggists another, ten druggists and two chemists. Of these, eleven apothecaries were new in that they had not been listed in George Parker's 'List of Medical Men in Bristol'. The single entry, in this later list, for Thomas Smith was proved by the Poll Books to be for two, father and son with the same name. The ten druggists and two chemists had not been previously listed.

Comparison of the Burgess Roll and the Poll Books reveal a striking feature in the way the Burgess entries were clustered in some of the election years – 1739 seven, and 1774 nine entries. The later election was particularly strongly contested being the one at which Edmund Burke was returned as MP for Bristol. This clustering suggests that the candidates rounded up prospective supporters and encouraged them to become enrolled and thus able to vote in the elections. This shows that the control by the City Council over tradesmen by means of enrolment in the Burgess Rolls was considerably weaker than in the previous centuries and that practice was not restricted to enrolled Burgesses.

The use of Poll Books as a simple means to commence listing apothecaries for any area can be recommended to local historians. They have the advantage, at least the Bristol ones have, of being printed; of the sixteen books (from 1722 to 1847) available in Bristol, only one for the year 1820, is in manuscript, when there is an alternate source, a directory. Armed with this list work on documents in unfamiliar script is easier. Many of the names will reoccur, after making allowance for minor differences in spelling, particularly in the earlier documents where names tend to be written phonetically. Using Apprentice Books or Burgess Rolls can be fascinating, chains of apprentices and masters can be traced like family trees.

http://dx.doi.org/10.24355/dbbs.084-201801041611

Josiah Wedgwood's Doctors

Dr. E. POSNER

*"Let the Doctors say what they will, don't place too implicit a faith in them. They are often deceived and look graver than they need to do ..... (W. t. B., 30.7.1773).**

The fame and success of British pottery manufacture has been inseparable from the name of Josiah Wedgwood, F.R.S. (1730-1795), master-potter, inventor, canal-builder, business man, philanthropist, champion of the American and French revolution, an early member of the Society for the Abolition of Slavery and closely connected with the circle of Birmingham's "Lunar Society".

Josiah was the youngest son of the master potter Thomas Wedgwood of Burslem (1685-1739) who died when the boy was nine years old. He left a small factory, a large family and little money. Josiah was to become a "thrower" – the highest grade in the complicated hierarchy of pottery craftsmen but at the age of 11 years he contracted "an iminently virulent and confluent smallpox" (Metyard 1866/67). According to the somewhat imaginative Metyard, smallpox entered the Wedgwood home from the adjoining churchyard "where the festering heaps of corpses grew larger and larger".

The censorious Eliza Metyard wrote of the resulting "stiffness and deadness of Josiah's right leg and of the doctors who were at best a race of empirical old women whose remedies were divided between the basins and lancets of their predecessors, the barbers, and the nostrum of the quacks". Seventy years later Pearson (1930) went even further: ". . . . . he (Wedgwood) owed his survival to the fact that there was no doctor in the neighbourhood, for then even more than now, doctors were useless in epidemics".

It can be assumed that Josiah Wedgwood's chronic infection of his right knee joint with its frequent and unusually post-traumatic exacerbations was due to osteomyelitis a recognised complication of severe variola. (Ramsey & Edmond, 1967).

Wedgwood, even after the amputation of his leg in 1768 was of robust health. At times of heavy stress he experienced eye troubles and "uneasy sensation of straightness across my breast" (W. t. B. 12.10.1772). This may have been a sign of beginning cardiac disease. The same symptons re-occurred during his terminal illness at the end of 1894, together with pains in his jaw, palpitations, intermissions of pulse, dyspnoea, debility and terminal fever. (Metyard 1866).

The stiff leg meant the end of Wedgwood's career as a thrower which was a blessing in disguise. His long convalescence and the numerous exacerbations of his chronic infection allowed him to turn his mind to the study of "philosophical pursuits" and to an education which his widowed mother had been unable to provide. His first tutor was the remarkable minister of the Old Unitarian Meeting House in Newcastle-under-Lyme, William Willett (1697-1779) who later married Wedgwood's sister Katherine. Willett was "versed in philosophy, magnetics, optics, etc.," (Pegler, 1922) and although Wedgwood's spelling always left something to be desired, Willett doubtlessly provided a sound basis for further philosophical pursuits.

Matthew Turner (died 1789)

Wedgwood started potting on his own account in 1759 and on one of his business trips on horseback to Liverpool injured his right leg. He arrived with a "badly swollen and painful knee" at one of the numerous inns of Dale Streel, Liverpool, whose landlady advised to take council with a "surgeon of good repute, a man of eminent skill ..... and living hard by in St. John's Street", Matthew Turner.

Turner was obviously a man of the widest "philosophical" interests. An anonymous writer in the Lancet (1897) even credits him with "rediscovering the art of stained glass" – a statement unsupported by reliable sources but Turner was an expert and enthusiastic chemist who ceaselessly experimented with varnishes, fumigations, bronze powders and other amalgams.

He was a founder member of the non-conformist Warrington Academy where he introduced Priestly to the subject of chemistry and lectured at the Liverpool Academy of Art on anatomy and the theory of form.

In his monograph on aether (1761) it is difficult to find any affliction in which, either taken internally or applied externally – aether does not produce miraculous cures: epileptic fits, hysteria, hypochondria, rheumatism, gout, windy disorders of stomach and gut, deafness, pleurisy, asthma, hiccups and whooping cough – to name only a few. "Some particularly obstinate tumours

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* W. t. B. in this paper denotes Wedgwood's letters to Thomas Bentley and – if not otherwise stated – are quoted from either Farrer K. (1906) or Finer and Savage (1965).

+ Based on a talk given to the British Society for the History of Pharmacy at Keele, September 1972.

http://dx.doi.org/10.24355/dbbs.084-201801041611

had successfully dissolved by applying it to them when other means had failed ....". Turner had found it an "extraordinary diuretic" and even more surprisingly "A dose of it taken at going to bed, after drinking too freely, has been found to prevent the headache and sickness which usually follow next morning". Turner has not found a place in the history of anaesthesia but as he advertised his "extraordinary medicinal fluid" at – two shillings for the Ounce-Phial (with proper abatement to Druggists, Apothecaries or the Gentlemen of the Faculty who use any considerable Quantity) and appointed retailers in Liverpool, London and Dublin, – he may well have derived considerable material benefits from its sale.

In those days when the term "man-midwife" was still one of derision (Malkin 1961) the advertisement inserted by Turner into the Liverpool Chronical and Gazetteer (1757) needed some moral courage:–

> "As a lying in hospital in this town ..... must require a considerable time before it can be completed, the following Proposal is made to relieve the most pitiable part of the lying – in poor in the meantime ..... As many unfortunate poor Women and their infants, suffer greatly through the insufficiency of Midwives in Difficult Cases; and as the expense of calling a Man Midwife ..... often prevents the Indigent from having proper assistance; ..... and as almost every person is engaged in this Juncture in contributing towards relieving the distresses of the Poor ..... I do hereby inform the Public, that I am ready to attend and assist to the best of my power G R A T I S, all married Women ..... whose Cases in Labour are Difficult or Dangerous ..... provided they are not able to pay".

Although Turner hoped – in a postscript in his advertisement – that the "Gentlewomen who practise midwifery ..... will not look upon anything mentioned here as designed to prejudice or undervalue them" they seem to have carried the day and nothing further has been recorded of his philanthrophic scheme (Lancet 1897).

The doctor-patient relationship in the hostelry of Dale Street soon developed into friendship. The leg "remained painfully affected and the wound slow to heal" giving surgeon and patient ample opportunity to "discuss the subject of chemistry" and to supply Wedgwood "with receipts (sic) for varnishes and other appliances of great utility in his manufacture". (Metyard 1865). The most momentous sequel of Wedgwood's accident however, was the introduction to a "handsome, well-dressed man of most attractive manners and courtly air "whom Turner asked to keep his patient company during his convalescence. The bringing together of Thomas Bentley (1730-1780) with Josiah Wedgwood was Turner's greatest contribution to the history of the Industrial Revolution, and more important than the useful amalgams, varnishes, and "fumigations" which he freely supplied to Wedgwood and Matthew Boulton (1728-1809) in Birmingham. (Schofield 1963).

His "valuable circle of celebrated persons" (Shaw 1829) included Sir Joseph Banks, Sir William Hamilton, Joseph Priestley, Matthew Boulton and Thomas Day. Bentley entered into formal partnership with Wedgwood in 1769. Their respective roles have been concisely defined by Wedgwood himself: "..... in the distribution of our employments between us the manufacturing has fallen to my lot and the sales to yours". (W. t. B. 20.9.1779). Bentley's business sense, charm and connections achieved what Wedgwood once jocularly wrote of one of Matthew Turner's fumigations:
"we shall be able to turn the dirt under our feet in gold" (W. t. B. undated).

JAMES BENT (1739-1812)

The General Practitioner of the Wedgwood family. The "Staffordshire Advertiser" of June 6, 1812, announced "Suddenly, on Wednesday last at Basford, Newcastle-under-Lyme, Jas. Bent., M.D., aged 70". Attempts to find the source of his M.D. have failed but whatever his academic qualifications may have been, Bent was an extremely competent surgeon for his time.

In 1774 the Transactions of the Royal Society published his account of the excision of a carious caput humeri, "redde" to the Society by Dr. William Hunter (1718). The paper deals with the case of Mary Turner, a farmer's daughter from the village of Ipstones Staffs who had been suffering from an "abscess in her right shoulder joint for three years". Bent considered but eventually rejected amputation and decided on the excision of the caput humeri. Present day leading orthopaedic surgeons consider Bent's paper "a fascinating and remarkably accurate account of an operation with a careful approach to the shoulder joint which not so long ago we used to perform in cases of extensive tuberculous infections of the humeral head" (Wainwright, 1971).

Mary Turner walked after the operation from Bent's house to her lodgings in Newcastle "her pain not very considerable". Some weeks later "She was able to raise her elbow five to six inches from her side, put her arm back, lace her stays, put on her cap, sew, and do any business as well as ever that does not require the elbow more raised". (Bent, 1774).

No published account exists of Bent's most important operation, the amputation of Josiah Wedgwood's right leg above the knee on 31st May, 1768, but from Wedgwood's letter to Bentley, the story can be reconstructed with reasonable accuracy.

From Wedgwood's account it seems obvious that Bent was not a "saw-happy" surgeon and that he always tried "vomits" and rest before resorting to scalpels and saws. In many instances his conservative approach "had

http://dx.doi.org/10.24355/dbbs.084-201801041611

relieved the Part in a manner which appeared little less than miraculous". Unfortunately neither vomits nor rest had relieved Wedgwood's symptons at an exacerbation of his long-standing affliction in 1768, and Bent decided on amputation above the knee, Whether his patient – as Eliza Metyard wants us to believe – "looked forward to this necessity with philosophical cheerfulness" may be doubted, but the operation was not less successful than that performed on the humble Mary Turner. The faithful Bentley was present as were an unknown number of Wedgwood's workmen, who presumably "bestrode the limb to be amputated . . . . . held and stayed the diseased member . . . and delivered the sharp instruments and needles". (Woodall, 1639). According to Wedgwood's personal account book in the Barlaston collection, they were awarded "five shillings for ale" a generous ex gratia payment considering that the average weekly wage of the most skilled pottery craftsmen at that time was eight shillings. (Weatherill, 1971).

Wedgwood dispensed with laundanum after three weeks, directed his business affairs throughout his convalescence and when after about four weeks he measured his wound "with the compasses" and found it "not quite two inches by one and a half" he turned his surgeon adrift". (W. t. B. June, 1768).

(To be concluded)

NEW BOOKS

Pharmaceutical Glass

J.K. Crellin and J.R. Scott. The Wellcome Institute of the History of Medicine, 183, Euston Road, London, N.W.1. 9¼ x 6½ pp 72. £4.00

THIS beautifully produced and lavishly illustrated booklet describes some of the glass items in the Wellcome collection.

After a brief historical introduction about apothecaries, chemists and druggists, numerous examples of glass vessels used for window display, pharmacy interiors and dispensary containers are described and illustrated. These include specie jars, carboys and show globes, shop rounds and poison bottles.

An appendix reproduces an interesting itemised account for pharmaceutical ware supplied to Guy's hospital in 1925.

There is a catalogue of the Wellcome collection and 119 annotated references.

The booklet will be valuable to all interested in pharmaceutical glassware.

T.D.W.

Obituary

O. H. Waller FPS

PHARMACY has suffered a great loss in the sudden death of Mr O.H. Waller on Feb. 12, 1972 and this Society is particularly unfortunate to lose his services as editor of the Pharmaceutical Historian after so short a time.

Mr Waller had been editor of the *Chemist and Druggist* for 20 years until his retirement in 1970. He had always shown an especial interest in history and he was especially proud of the *Chemist and Druggist's* excellent series of annual special numbers which were published over many years. This had contained numerous important historical papers and Mr Waller was very sorry when the special numbers had to cease a few years ago. Nevertheless he continued to publish historical papers as frequently as circumstances would allow.

Mr Waller's interesting address, "History in the Pharmaceutical Press", was published in the *Pharmaceutical Historian* in March 1971. This contained over 550 references to papers in the *Pharmaceutical Journal* and the *Chemist and Druggist* and is a valuable source of information for historians.

The Society will greatly miss Mr Waller's pleasant company and wise counsel at Committee meetings. We are fortunate to have secured as our new editor his successor as editor of the *Chemist and Druggist,* Arthur Wright.

T.D.W.

Memorial Lectures

DR T.D. Whittet, president of the Society, has been nominated as the Harrison Memorial lecturer and medallist for 1973 and will speak on December 5 on "Some Contributions of Pharmacists to Analysis". He gave the Wright Memorial lecture at Sydney, Australia, in March 1972. His topic was "Some Contributions of Plant Chemistry". On March 16, 1973, he gave the Winch Memorial lecture at Sunderland Polytechnic, where he had qualified under Miss Winch. He spoke on "Some Contributions of British Pharmacists to Botany".

http://dx.doi.org/10.24355/dbbs.084-201801041611

PHARMACEUTICAL HISTORIAN

Vol. 3 No. 2
September 1973

Newsletter of the BRITISH SOCIETY FOR THE HISTORY OF PHARMACY
Contributions to the Editor: Arthur Wright F.P.S., D.B.A. 17 Bloomsbury Square · London · W.C.1

The Society

Amendments to Constitution and Rules

AT the annual meeting held at Portsmouth on April 7, the President moved the following amendments to Section X, paragraph 1 of the Constitution and Rules. The changes were approved:

> That "three of the nine members" and "the three members" should be replaced by "four of the twelve members" and "the four members"

The order of retiring of the three additional members elected to the Committee in 1972 was determined as follows: 1973 – D E Sparshott; 1974 – A Wright; 1975 – Mrs J Burnby.

In the absence of further nominations Mr J C Bloomfield, Miss D A Hutton, Mr D E Sparshott and Dr T D Whittet were re-elected to the Committee and Dr D C Harrod and Mr G R A Short were re-elected auditors for the coming year. Membership of the Committee for 1973-74 was therefore as follows:

Due to retire 1974:- CG Drummond, LG Matthews, A Wright and Miss GM Watson.

Due to retire 1975:- Mrs J Burnby, Dr JK Crellin, Dr MP Earles, and Mrs A Lothian Short.

Due to retire 1976:- JC Bloomsfield, Miss DA Hutton, DE Sparshott and Dr TD Whittet.

At a recent committee meeting the following officers were elected: President: Dr TD Whittet; Vice-President: Dr JK Crellin; Treasurer: Mr JC Bloomfield; Secretary: Miss DA Hutton.

Congratulations

ALL members of the Society join in congratulations to Mr JC Bloomfield, the Society's Treasurer, whose name appeared in Queen's Birthday Honours List. He was awarded the OBE for his services to pharmacy and the National Health Service. "Jimmy" Bloomfield has, what he describes as, a "modest historical collection; some of the material has been on display at the Portsmouth museums and a number of pharmacists who attended the British Pharmaceutical Conference at Portsmouth in 1961 will recall the exhibition he and Mr. Chamberlain prepared. Amongst his collection is a Venetian Albarello drug jar c 1590 that was used by the Distillers Co. (Biochemicals) Ltd. to illustrate a leaflet "A study in Pharmaceutical Elegance".

Mr Bloomfield has also a good example of a Victorian leech jar that he uses as an illustration on his letter-heading.

Congratulations are also offered to D E Sparshott, a committee member who has become President of the Pharmaceutical Society of Great Britain after serving on the Council for many years.

Make a note of these dates

DURING the British Pharmaceutical Conference, London Sept. 10–14, the Society is arranging a History of Pharmacy Session at 17 Bloomsbury Square, on September 11 at 2.15 pm. There are to be two papers, "Bloomsbury Square and Bloomsbury" by R.G. Todd, and "The Chelsea Physic Garden" by D.C. Harrod.

All who are interested in the history of pharmacy are invited to attend the session, whether or not they are members of the Conference or the Society.

Cambridge Conference

THE venue for the Spring conference, 1974, is Cambridge where accommodation has been reserved in the new part of Selwyn College for the weekend March 22-24. Programme details will be published when arrangements are complete. It is hoped to include papers on science in Cambridge in the 18th Century, medical education in Cambridge and the early history of some apothecaries.

http://dx.doi.org/10.24355/dbbs.084-201801041611

Josiah Wedgwood's Doctors

Dr. E. POSNER

*"Let the Doctors say what they will, don't place too implicit a faith in them. They are often deceived and look graver than they need to do ..... (W. t. B., 30.7.1773).**

Understandably from 1768 onwards expertise in making wooden legs was of considerable advantage to applicants for a job at Etruria. The first successful candidate was a certain Brown, "a mathematical instrument maker, a wooden leg maker, a caster of printers types ..... he wears a wooden leg, at present he is making me some legs". (W. t. B. 1769).

Bent continued to take a very active part in medical and non-medical affairs of the Wedgwood family and manufacture. At about the same time as Matthew Boulton (1728-1809) in Birmingham he established a private health service for his servants and workpeople for which Bent acted as apothecary and surgeon. (Billington, 1971). Some of his quarterly bills have been preserved. Of the manifold medicines and items of service charged for, only a few can be quoted here:

Four ounces of antimonial wine:	4/-
Horse powders:	1/8
Turkey/Rhubarb:	4/-
Chamomile flowers:	1/-
A visit	5/-

A "bleeding" of one of his workers reduced Wedgwood's growing fortune by only one shilling and the annual expenditure for his philanthrophic scheme was averaged at £120.

James Bent's son and heir, John Bent, died at an early age "as the result of the accidental discharge of a fowling piece". (Alumni Cantabrienses 1752-1900). Most other members of the large Bent family emigrated to Liverpool where they prospered in the beer-brewing business.

SIR JOHN ELIOT, BART, MD. of PEEBLES (1736-1789) Sir John consulted by Wedgwood in December 1769 for what he "first apprehended to be Gutta serena (W. t. Byerley, 1774) had a colourful medical and social career. He was the only son and heir of Thomas Eliot, agent and solicitor to Frederick, Prince of Wales (Innes-Smith, 1933). His share of prize money as a surgeon's mate to a successful privateer enabled him to set up in fashionable practice in London. In 1771 he married the daughter of the Attorney General of Grenada, the Scottish Belle Grace Dalrymple (1758-1823). Three years later Grace eloped with the Count Valencia bringing John Eliot another windfall in the shape of £12,000 damages. The beautiful Grace became one of the great courtesans of her age, generally known as "Dolly the Tall". Neither Munks Roll (1887) nor the Dictionary of National Biography (1889) consider Eliot as a physician of great merits but credit him with publications ranging over a wide field of natural philosophy and medicine, a fact which casts some doubt on the infallible accuracy of these venerable encyclopaedias. Innes Smith (1933) has convincingly shown that they were in fact written by Sir George's unfortunate namesake, Dr. John Eliot who died in Newgate Prison in 1781, after an unsuccessful attempt of murdering a Miss Boydell of Cheapside for whom "he left his business to the fatal luxury of an unhappy Passion". (Eliot J., undated).

The dreaded gutta serena turned out to be nothing more serious than "muscae volitantes" and Wedgwood quite unnecessarily practised to see "with his fingers" in case of becoming blind. (W. t. B. 15.1.1770). Of what he understood to be "Mice Volanti" Wedgwood gave a most vivid account accompanied by a characteristic sketch of the floating ever-moving "atoms before his eyes". (W. t. B. 1.1.1770).

Eliot thought that "there is always some danger in these cases" and prescribed a "Colyrium of Elderflower water, camphorated sugar of Lead, Spirit of Wine and something else which I forgot" (W. t. B. 1770). These administrations and the embargo on reading and writing by candlelight had little effect, neither had Bent's perpetual blister behind Wedgwood's neck. For some years Wedgwood feared for his eyesight although that

*W. t. B. in this paper denotes Wedgwood's letters to Thomas Bentley and – if not otherwise stated – are quoted from either Farrer K. (1906) or Finer and Savage (1965).

+ Based on a talk given to the British Society for the History of Pharmacy at Keele, September 1972.

(Concluded from PHARMACENTICAL HISTORIAN MAY 1973, p.6)

http://dx.doi.org/10.24355/dbbs.084-201801041611

master of psychosomatic medicine, Dr. Erasmus Darwin assured him "that everybody at one time of life or other had the same appearances before their eyes but everybody did not look at them". (W. t. B. 1.1.1770).

WILLIAM HEBERDEN (1710-1801)

WILLIAM HEBERDEN (1710-1801) Heberden saw Wedgwood in his house in Pall Mall in 1788. The reason for the consultation was Wedgwood's "rheumatic headaches" of which he had complained in a letter to Benjamin Franklin (Wedgwood to Franklin 29.2.1788). Heberden prescribed a blister and a holiday (W. to Heberden 25.4.1788). It can be safely assumed that at that particular time, when most of Wedgwood's thoughts centred on copies of ancient arts, the consultation with Heberden whom his most illustrious patient, Samuel Johnson had called "ultimum Romanorum, the last of our learned physicians" was a lengthy one not only concerned with "rheumatic" headaches.

ERASMOS DARWIN (1731-1802)

The memorial plaque to Erasmus Darwin to be seen in St. Giles Cathedral, Lichfield praises his vivid imagination, far-sighted views, and skilful observations but continues with the slightly derogatory remark ". . . his speculations were mainly directed to problems which were afterwards more successfully solved by his grandson Charles . . ." In recent years Darlington (1959) and King-Hele (1963) have convincingly shown that "the shares of Erasmus and his grandson Charles (in the theory of evolution) "are more nearly equal than is usually supposed".

In the field of literature he has been called "the pretender to the position of the worst poet in the English language" (King, 1958), which – did not prevent Wordsworth, Coleridge and Shelley from borrowing freely from his long poems "Botanic Garden" (1789-1791) and "Temple of Nature" (1803). He was necessarily limited by the therapeutics of the 18th century and his account of the nine cases treated with the Foxglove (Zoonomia 1794-96) makes today horrifying reading – both as to indication and of dosage. He was widely considered the foremost physician of his time who could afford to turn down an offer by George III to become his doctor.

He used his house in Lichfield's Cathedral Close as a hospital and a dissecting room for anatomy lessons on executed felons (Ari's Birmingham Gazette 1762) and provided poor patients not only with free advice and medicine but also food and blankets. (Pearson 1930, King-Hele 1963). His opera magna – Zoonomia and Botanic Garden – are admittedly difficult to digest but his little known work "A plan for the conduct of female education in boarding schools" (1797) contains eminently readable proof of his progressive ideas in the prevention of disease. Darwin wrote the treatise for his much beloved two illegitimate daughters – known as the Misses Parker – whom he set up as headmistresses of a boarding school in Ashbourne.

He was the "Esculapius" of the Wedgwood family in most clinical crises, introduced Josiah to the stimulating fraternity of Birmingham's Lunar Society, successfully canvassed for Wedgwood's scheme for the eminently important Grand Trunk Canal and last but not least, by getting two of his numerous children married to Wedgwoods and Galtons he initiated the gene-pool of brilliance and the environment of wealth and leisure which provided the Royal Society with Fellows for almost 200 years, of whom two, Charles Darwin (1809-1882) and Francis Galton (1822-1911) made a tremendous impact on the natural sciences of the 19th century.

Wedgwood's and Darwin's association and friendship became close in the planning stage of the Grand Trunk (Trent-Mersey) Canal in 1764. Darwin was a lifelong addict of solving problems of transport by road and water and Wedgwood needed the canal for the cheap transport of clays and flint from Cornwall and Devonshire and for sending his ware by barge to Liverpool. Having secured the services of the brilliant canal engineer, James Brindley (1716-1772) whom Darwin failed to save from an untimely death from diabetes, Wedgwood found another "ingenious and zealous friend to our cause" in Erasmus. (W. t. B. 20.4.1765). But he was not uncritically zealous: Wedgwood wrote to Bentley (October 7th, 1765): "I doubt not but you have received a long critical epistle from our ingenious and poetical friend Doct. Darwin; which I doubt not if it is such as he generally favours his friends with, has afforded you entertainment and shock your diaphragm for whatever it may have done respecting your Pamphlet on Navigation," (1765). Darwin persisted in fostering the great scheme, but his design for canal lifts was not accepted until 100 years later for the Anderson lift between the river Weaver and the Grand Trunk Canal. (King-Hele, 1963).

The Trent Mersey Canal was eventually opened in 1777, running – to the chagrin of his competitors – alongside Wedgwood's new factory at the Ridge House Estate near Hanley close to coal mines and fireclay pits. Obviously a more sonorous and attractive name was needed than Ridge House and most authors agree (Metyard 1855, Ward 1843) that the poetical Doctor Darwin suggested "Hetruria" soon to be changed into Etruria. Thus:

". . . . . and Pleased, on Wedgwoods ray your partial

http://dx.doi.org/10.24355/dbbs.084-201801041611

smile a new Etruria decks Britannias Isle".

(Darwin 1789).

Alas under false pretences. Wedgwood's most famous ornamental ware, especially his vases were not modelled on the art of the ancient Etruscans at all. Their neo-classical style was based on ceramics – collected in "Magna Grecia" by Sir William Hamilton (1730-1803) ambassador to the Court of Naples and better known as the husband of Nelson's Emma. However the new name found general acclaim and remained of world-wide fame long after the green and pleasant valley of Etruria had become the polluted inferno of today.

Mechanical power was one of Wedgwood's pressing technological problems at Etruria. At that time the design of the steam engine of his "ingenious and philosophical friend" James Watt (1869-1919) was unsuitable for the circular motion Wedgwood needed for his flint and colour mills. The not less ingenious Doctor from Lichfield came again to the rescue. A "Windmill of Dr. Darwin's projection" was first mentioned by Wedgwood to Bentley in letters of March 3rd and 15th, 1768: Wedgwood waited a while but after nine years a modified version of Darwin's flintmill was installed at Etruria where it functioned 14 years until Messrs Boulton and Watts supplanted it with their "Sun and Planet Engine".

In the medical affairs of the Wedgwood family Darwin's problem patient was Wedgwood's wife Sarah (1734-1815) whose many afflictions – such as rheumatic arthritis and miscarriages have been well extracted from Wedgwood's letters by Meiklejohn (1950,51). On one occasion when after a late miscarriage and despite the administrations by both Bent and Darwin she seemed on the brink of death, Wedgwood took over. He administered "fruit and ripe plumbs and . . . for the wind I have given her Cyder that blows the cork up to the ceiling. She relishes it vastly and it does her good". (W. t. B. 10.9.1772).

During the influenza epidemic of 1775/1776 the worst affected was Josiah's cousin Thomas Wedgwood whose symptons were "so serious that we thought it proper to call in Doctor Darwin. If we had omitted this a few days longer . . . . my Cousin would have been demolished for under the idea of keeping the Enemy out of his Stomach, and coaxing him into the extremities, his ignorant Apothecary, with Drams, Strong Wines – Flannels, hot baths, and a close stove of a Room had had almost melted his patient down into a Mummie". Darwin "unswathed" poor cousin Thomas, gave him a little fresh air and ordered a little blood to be taken. Thomas duly recovered. (W. t. B, February, 14th, 1876).

This incident shows Darwin's medical commonsense at its best which is more than can be said of his treatment of Wedgwood's youngest daughter, who at a time of teething troubles and convulsions was ordered "to be electrified two or three times a day, and to be continued for some weeks", in addition to having her gums lanced. (W. t. B. 8th November, 1779).

This did not prevent Mary Ann Wedgwood's early death. Darwin presumably used the "smart electric shocks from a coated quart bottle" by which he had achieved a miraculous cure of obstructive jaundice. (Zoonomia, 1794, I, 348).

When at the age of 65 years, Josiah Wedgwood's time ran out, Darwin hastened to his friend's deathbed and characteristically stopped all treatment because he perceived "signs of mortification" from what seems to have been a coronary thrombosis.

Thus some of Wedgwood's doctors were largely responsible for the eminent success story of Josiah Wedgwood who left an estate of half a million pounds. (Metyard 1866). Furthermore, the story supports a present-day historian's dictum that "the history of medicine becomes only fascinating when it relates to the cultural and intellectual patterns that have acted on physicians and patients alike". (King 1971).

ACKNOWLEDGEMENTS:

I am most grateful to the librarians of Newcastle, Derby, Lichfield, the Royal College of Surgeons, the Royal Society and of the North Staffordshire Medical Institute for their help and advice. Mr. Billington, ex-curator of the Wedgwood Museum at Barlaston, let me have access to the Wedgwood archives and I also thank Mrs. M. Hampton for her secretarial help.

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Military and Naval Medicine

The successful Portsmouth conference had as its theme "Military and Naval Pharmacy and Medicine". The first paper by Dr Sydney Selwyn dealt with "Sir John Pringle and 18th Century Medical Science". Dr Selwyn said that few figures in medical history have been as versatile as John Pringle. An account of him could just as appropriately have introduced symposia on, for example, antisepsis, moral philosophy, hospital cross-infection or the Royal Society as well as on military and naval medicine.

Born in 1707 in Roxburghshire, Pringle, the youngest son of a baronet, received his first formal education at St. Andrews University in classics and philosophy. He then started his medical studies at Edinburgh University, but after only a year moved to Leyden to study under Boerhaave. For his graduation in medicine he produced a pioneer thesis on the pathology of ageing. After further studies in Paris he then returned to practice in Edinburgh. Three years later, at age 26, Pringle was appointed Professor of Pneumatical and Ethical Philosophy at Edinburgh while continuing as a successful physician. In 1742 he was appointed physician to the British Army but retained his philosophy Chair for a further three years until his promotion to Physician-General.

HIGHLY PRODUCTIVE

Pringle's eight active years in the Army were highly productive. He proved that "hospital fever" and "jayl fever" were identical (typhus) and he detailed their prevention. He also published from 1752 onwards successive editions of his famous 'Observations on the Diseases of the Army". These established him as the "Father of Military Medicine" and contain the first scientific study of hospital cross-infection, early applications of the germ theory and details of the first experiments on "septic and antiseptic substances". Pringle also established the neutrality of military hospitals and promoted the general welfare of the troops.

DAZZLING CAREER

The culmination of his career was in London where he became President of the Royal Society, Physician to the King and Queen, baronet in his own right and received dazzling honours at home and abroad. Dr. Selwyn also referred to Pringle's astonishing range of publications in medical and general science, theology and other fields and his musical, artistic and linguistic gifts. "This extraordinary man has been neglected by historians far too long."

The next paper by Mr W.H. Boorman on "Gaol Fever and Naval Hospitals" referred to Britain's 18th Century wars and the significance of typhus fever among Spanish prisoners.

He mentioned the use, for disinfection, of nitric acid fumes by James Carmichael Smyth recorded in an account of gaol fever amongst the Spanish prisoners in Winchester during 1780.

Miss K.E. Crowe's paper surveyed the "Medical

http://dx.doi.org/10.24355/dbbs.084-201801041611

Arrangements in the British Army during the Peninsula War" with special emphasis on the organising ability of Sir James McGrigor.

"Naval Therapy 1860 – 1960" the first paper on Sunday morning and was presented by Dr M.P. Earles and Mr A.F. Prosser.

The authors opened their paper with an account of the development of modern navy from the launching of the iron ship HMS Warrior in 1860 to the steel plated HMS Dreadnaught in 1906. In 1860 the majority of men were still serving in wooden ships and voyages were often long. Water was usually bad and provisions inadequate. With the advance in marine technology ship ventilation, sanitation, drinking water and living conditions all improved resulting in beneficial effects upon the general health of the navy.

Another major factor in the improvement of health was the naval medical service. An account of the evolution of the service was given and attention was drawn to the significance of the elevation of the assistant surgeon to the wardroom and to the concept of a trained sick berth staff capable of undertaking medical duties in naval hospitals and on detached service in HM Ships. Reference was also made to the pharmaceutical service beginning with the Order in Council of 1872 when the Pharmaceutical Society qualification was established as a prerequisite for undertaking 'dispenser' responsibilities in naval medical stores.

The authors then went on to deal with specific matters relating to therapy.

The treatment of venereal diseases in the army and navy was the subject of a committee set up under F.C. Skey in 1964. The committee reporting in 1867 recommended mercury and mercurials used in moderation. The manner in which naval doctors used mercury following the Skey report was then discussed together with information on the various forms in which it was exhibited and the manner of its administration. The efficient use of mercurials was put forward as one of the reasons for the dramatic decline in the incidence of venereal disease amongst naval personnel between 1905 and 1915.

The paper was concluded with a reference to the introduction of Salvarsan, the sulphonamides and penicillin into treatments of venereal diseases in the navy. It was pointed out that in the early days naval M.Os were disappointed with Salvarsan because it did not substantially reduce the number of days lost to the service for each patient under treatment. It was suggested that this was because long established routines were interfering with the early diagnosis of syphilis with the result that, in the majority of cases, the drug was not being employed until the disease had reached the secondary stage.

The final paper concerned Sir James Cantile (1851 – 1926) in which Dr J. Fairer gave an account of the founder of the Volunteer Medical Staff Corps which later became the Royal Army Medical Corps of the Territorial Army.

Cordial Waters and Cordial Chests

D.A. HUTTON

In these sober days of the National Health Service it is difficult to appreciate what vast amounts of strong alcohol our ancestors drank on medical advice, or the important place alcohol once held in therapeutics. The medical significance of alcohol in the past is usually forgotten, overwhelmed by its social consequences. We are forcefully reminded by Hogarth and Cruickshank of the vicious aspects of alcohol in the eighteenth and nineteenth centuries, whilst splendid loving cups and fragile glasses recall a pleasanter, more convivial picture, but the only tangible evidence of the widespread use of alcohol as a cordial medicine lies in the little known cordial chest.

Surviving cordial chests date mainly from the eighteenth and early nineteenth centuries. Externally, they look much like the small medicine chests or plain tea caddies of the period. They are anonymous in their simplicity, but occasionally, they can be dated approximately from illustrations on trade cards, like that of John Folgham, c. 1760. Folgham was a case and cabinet maker of London, who sold shagreen, fishskin, dogskin and mahogany cases. Together with lancet, instrument and spectacle cases, he advertised "smelling and dram (or cordial) bottles and cases".[1]

There is a representative group of chests in the collections of the Wellcome Institute of the History of Medicine, of various materials: oak, deal mahogany and fishskin, lined with paper or velvet. Each is fitted with three to twelve unlabelled bottles, whose capacities range from ten ounces to two pints. The bottles are usually square, occasionally octagonal, or triangular, with decorative cutting on shoulders, rim and stopper. In some examples, the stopper does double duty as a drinking glass, holding an exact half ounce, the amount usually recommended as a cordial dose. At first sight these unassuming chests appear to have little medical or

http://dx.doi.org/10.24355/dbbs.084-201801041611

pharmaceutical significance, until one considers the history of their contents and the place that cordials held in the practice of physick until the nineteenth century.

The cordials included any drug which produced a sensation of warmth and well-being, and appeared to have some action on the heart. Basically, they were aromatic drugs, herbs and spices, and were administered in most dosage forms, from simple powders and aqueous infusions, to elaborate electuaries and sophisticated juleps. During the seventeenth and eighteenth centuries, one of the most popular forms was the compound water or spirit. It was prepared by infusing or distilling aromatic drugs in alcohol, either wine or strong waters like brandy. This produced an acceptable medicine, in which the drugs was fortified by the important cordial action of the alcohol. Traditionally, this type of cordial was introduced into medicine by the School of Salerno in the twelfth century, soon after the discovery of alcoholic distillation. Strong waters quickly acquired occult and sympathetic associations, for distillation was one of major transmutation processes used by alchemists in their search for the Philosophers' Stone. Dissolved in the appropriate solvent, the Stone was supposed to produce the Elixir of Life, and in strong alcohol, many philosophers thought they had found this peculiar liquid. Some claimed it as the Elixir of Life itself.

CURE ALL

The medicinal virtues of Aqua Vita were acknowledged by alchemists and physicians throughout the Middle Ages. By the sixteenth century it was established as an almost universal cure-all, being used for example, to strengthen the heart in bubonic plague, and in the English sweating sickness. A fifteenth century German, Michael Puff von Schrick, recommended half a spoonful of brandy each morning to preserve perfect health. The spirit of this prescription is still evident two hundred years later when John Woodall wrote of Spiritus Vini:

> "It preserveth a man in health if every morning and every evening he take certaine drops thereof, and defendeth the body that taketh it from the oppression of infectious aires, and (being sicke) almost in any disease it may safely be given as a true restorative medicine."

Apparently, a brandy a day kept the doctor away!

By this time, strong cordial waters were recommended as restoratives, to refresh the spirits in swoonings and faintness, to strengthen the stomach, correct the cold distemper of the nutritive parts, invigorate the heart, and "as an admirable help in the cure of epilepsy, lethargy, palsey and apoplexy, and other cold affectations of the braine and nerves.[3] "Later, they were used for gout and loss of memory.[4]

Recipes for cordial waters are as varied as they are numerous, ranging from Quincy's "untoothsome" Aqua Bryoniac Co., "good against convulsions in children and of service in any nervous complaint in either sex",[5] to Sir Walter Raleigh's delicious cordial of strawberries in aqua vita, or the Aqua Mariae, "an extraordinary cordial", but being pleasantly sweet and non medicinal, was "much fitter for the closet than the shop".[6] The preparation and sale of aqua vita and cordials were mainly in the hands of the apothecaries until the seventeenth century. There were only four distillers known to be working in London in 1575.[7] They were still too few in 1617 to exert any influence to prevent the Apothecaries of London claiming a monopoly of all distilled waters in their founding charter. This led to a series of disputes until 1638, when the distillers procured their own charter under the patronage of Sir Theodore Turquet de Mayerne, the King's physician, and a noted experimenter in cordial distillation.[8] The apothecaries had then to content themselves with the sole right of preparing the distilled waters of the London Pharmacopeia, and such others as the physicians prescribed.

The Distillers and the wholesale chemists and druggists took over the manufacture of the more complex spirits, but the competition scarcely seemed to limit the apothecaries' trade. At one time in Germany, the great consumption of strong waters and the riotous behaviour in the apothecaries' shops became a public scandal.[9] Robert Pitt, during one of the unnumerable quarrels between the Royal College of Physicians and the Society of Apothecaries, bitterly attacked the apothecaries, who, by encroaching on medical practice, neglected their proper business, pandered to the popular taste for strong liquors and filled their shops with the easily prepared hot cordial waters, brandy juleps and treacle boles.[10] Unable to charge for advice, or for visiting the patient, as the physicians did, the eighteenth century apothecary made his living as a general medical practitioner from the medicines he supplied. This probably had a strong influence on his prescribing habits, for he was accused of cupidity in prescribing oppressive quantities and an abundance of unnecessary boles and hot cordials for every disease.[11] The apothecary certainly attempted to make his medicines pleasing to the patient, paying particular attention to his cordials, choosing only what was "fine to the eye, grateful to the stomach", and preferably well aged.

Cordial waters were widely used in all circumstances. Carefully and tightly packed in their small chests, bottles of cordials were as much a part of a traveller's equipment as the medicine chest. John Evelyn, for example, preparing for a voyage to the Holy Land in 1645, purchased cordial spirits and a cabinet of drugs against sickness.[12] Daniel Defoe's Robinson Crusoe, rescued from

http://dx.doi.org/10.24355/dbbs.084-201801041611

his desert island, was first revived with a cordial dram, then presented with a "case of excellent cordial waters."[13] Naval surgeons preparing for battle casualities were advised to have their cordial bottles to hand, to revive the men when they fainted. John Woodall, the first Surgeon General of the East India Merchants' Company, discussing the place of cordials in the surgeon's chest, said:

> "for as much as compound cordial waters truely made of the Spirit of wine, with the addition of divers especiall costly and medicinal spices and drugs . . . have been found very available and comfortable by many experiences, not only at sea, and that in the very remotest parts of the earth either hot or cold to our nation and others in their travels but also here at home, upon many occasions, have ministered great help and comfort both in preserving the body in health from disease and in curing many great infirmities."[14]

It must be admitted, however, that there is a certain amount of truth in Woodall's later remark, that if they left out the spirit of wine or brandy from the cordial the remainder was not worth room in the glass.[15]

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NEW BOOKS

More Popular Antiques and their Values

Compiled and Edited by Tony Curtis. Lyle Publications Ltd. Liverpool Terrace, Worthing, Sussex. 8½ x 5½ in. pp 127 £1.80

FOR those who have some knowledge of the history and appearance of the antiques illustrated in this book, the black and white illustrations although sometimes inadequate, can act in some degree as confirmation of the image conjured up by the brief descriptions. This book might Tony Curtis says in his "Introduction" "be of assistance to those who . . . . . lack the confidence to plunge in at the deep end and buy". It must, however, be remembered that the values given can only reflect prices as at time of publication and the book lacks a critical assessment of the condition of the items quoted. I.E.M.

Castles in Britain

Stuart Barton. Lyle Publications Ltd. 7 Liverpool Terrace, Worthing, Sussex. 6 x 9 in. Pp. 335. £2.95.

THE chapters dealing with the development of castles and their transition from fortified dwellings to domestic purposes are indeed fascinating. This very comprehensive list of castles in England, Scotland and Wales arranged as it is in counties should provide a quick reference for students of history and architecture, and tourists alike. It would have been even more useful if, where approprate, more information had been given on the contents of the castles even if that meant sacrificing some of the space used for maps and photographs. Nevertheless, Stuart Barton has achieved his aim "to list illustrate and locate as many castles as possible for the benefit of the many who enjoy visiting historic sites. . . to offer, in a single volume references to over three hundred castles of Britain". It is likely to be a useful reference book to be kept in the car. I.E.M.

http://dx.doi.org/10.24355/dbbs.084-201801041611